The study of the effects and consequences of perceived website attitude

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Abstract
The main objective of this paper is to comprehend that exists between consumer values and perceived website attitude and consequences. 482 experienced Internet users of B2C online shopping in Taiwan. Empirical results indicated that both consumer values positively influenced on perceived trust and both negatively influenced on perceived risk of the website. For consequent variables, perceived trust both positively influenced on purchase intention; perceived risk negatively influenced on purchase intention. Furthermore, results showed that the perceived risk was an important moderating role.

1. Introduction
As B2C e-commerce has gradually grown, it has become more important not only to advance Internet technology but also for consumers to have trust in shopping websites (Pavlou, 2003). However, Internet environment have some questions, such as that consumers worry that their personal information may be disclosed or that the products are not as good as expected, led to increases consumers’ perceived risk of online shopping, compared to brick-and-mortar stores (Lee & Tan, 2003; Wang et al., 2003). Consequently, in order to reduce uncertainty and consumers’ perceived risk, online stores had to adopt some actions to make consumers generate trust in them (Njite & Parsa, 2005). Consumers’ perceived website attitude was crucial for e-commerce; therefore e-commerce could succeed only when consumers had trust in online stores (Kim & Benbasat, 2003; Lee, Ahn & Han, 2006; Salo & Karjaluoto, 2007). Therefore, the perceived website attitude investigated in this study focused on perceived trust and perceived risk.

Research supports the impression that shopping can provide consumer values which composed of utilitarian and hedonic shopping value (Hirschman & Holbrook, 1982; Jones, Reynolds & Arnold, 2006; Overby & Lee, 2006). Previous research focused on the investigation into offline stores. There was seldom research applying the categories of consumer value to online shopping. Hence, this study applied the categories of consumer values to the investigation of online shopping for making up the deficiency of previous empirical research.

For shopping websites, understanding how consumers’ trust was formed could thus make up the deficiency, and the most important purpose was to keep the current consumers and attract new consumers (Salo & Karjaluoto, 2007). In addition, the issue which all the shopping websites care about is how to trigger consumers’ purchase intention after they browse through the websites.

The purpose of this research is to investigate how consumer values differ in their relationships with perceived website attitude and consequences. The paper is organized as follows. First, we address theoretical framework, relative literature review and hypotheses. Then we discuss research method and the results of data analysis. Finally, we conclude with discussion of the findings, theoretical and managerial implications, limitations and future research.
2. Literature Review and Hypotheses

The theoretical framework for this study includes a total of five dimensions, which have grouped into three categories: (1) consumer values; (2) perceived website attitude of online shopping; (3) consequences (see Figure 1).

<table>
<thead>
<tr>
<th>Consumer values</th>
<th>Perceived website attitude</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilitarian Value</td>
<td>H1 Perceived trust</td>
<td>H5</td>
</tr>
<tr>
<td>H2</td>
<td>H7 Purchase intention</td>
<td></td>
</tr>
<tr>
<td>Hedonic Value</td>
<td>H3 Perceived risk</td>
<td>H6</td>
</tr>
<tr>
<td>H4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1 Theoretical model.

2.1 Perceived Website Attitude

As Jarvenpaa, Tractinsky and Vitale (2000) pointed out consumer trust in an Internet store as “consumer must believe that the seller has both the ability and the motivation to reliably deliver goods and services of the quality expected by the consumer, p.47.” Therefore, trust was a perceived attitude that consumers thought that online stores’ performance would meet their expectation (Pavlou & Gefen, 2004). Previous literature indicated that trust was a critical element influencing consumers’ desire to employ online shopping (Kim & Benbasat, 2003; Lee et al., 2006). Scholars deemed that e-commerce could not succeed unless consumers believed that e-vendors would not display any opportunistic behavior. Therefore, the issue of perceived trust was more important in e-commerce than traditional physical stores (Bhattacherjee, 2002; McKinney, Yoon & Zahedi, 2002).

Pavlou (2003) pointed perceived risk as “the distant and impersonal nature of the online environment and the implicit uncertainty of using a global open infrastructure for transactions have rendered risk an inevitable element of e-commerce, p.109.” It is difficult to measure as an objective fact. Therefore, most literature emphasized the concept of individually perceived risk, and defined it as consumers’ subjective belief in which a loss was caused by the outcome they pursued (Jarvenpaa et al., 2000; Pavlou & Gefen, 2004). Forsythe and Shi (2003) indicated that perceived risk of online shopping mainly came from the loss that consumers expected to have in the process of an electronic transaction. Generally, consumers thought that the perceived risk was caused by the perception that the Internet was not a secure territory or the degree of negative influence possibly resulted from a result (Grazioli & Jarvenpaa, 2000).

2.2 Consumer Values

In terms of the shopping motive of the consumer, researches brought up two types of consumption values influencing consumers’ shopping motives, appear to utilitarian value and hedonic value (Babin, Darden & Griffin, 1994; Grewal et al., 2003; Holbrook, 1994). As Overby and Lee’s (2006) clarification, “utilitarian value is defined as an overall assessment of functional benefits and sacrifices of functional benefits and sacrifices, p. 1161” and “hedonic value is defined as an overall assessment of experiential benefits and sacrifices, such as entertainment and escapism, p. 1161.” Utilitarian consumers are generally relevant for task-oriented and rational, whose shopping is achieved by the urge of particular consumption demands. That is, consumers purchase products through deliberation and efficient approaches. On the other hand, hedonic value tends to be more subjective and of selfhood; it is usually based on entertainment and fun instead of for the purpose of accomplishing a task. Therefore, hedonic value reflects the value of potential entertainment and emotion in shopping. In brief, utilitarian value and hedonic value were included, whether brick-and-mortar stores or virtual stores, such as online shopping (Babin et al., 1994).

Research indicates that the utilitarian value provided by online shopping, such as convenience and saving of time and money, efficiently advanced customers’ satisfaction and improved the relationship between mutual parties (Kenney, 1999; Wolfinbarger & Gilly, 2001). Katerattanakul (2002) argued that e-vendor have pretty friendly relationship with customers were helpful to improve consumers’ perceived trust in vendors. Consumers with hedonic value influenced a great
number of diverse perspectives on the perceived information processing, such as improving consumers’ loyalty to a website (Dube, Cervellon & Jingyuan, 2003), positively influencing the perceived website trust in e-commerce (Fiore, Kim & Lee, 2005; Hwang & Kim, 2007). The following hypotheses are formed as follows:

**H1:** The consumers with utilitarian value have positive effect on perceived trust for online shopping.

**H2:** The consumers with hedonic value have positive effect on perceived trust for online shopping.

Koufaris (2002) addressed that purchase on online shopping contexts, consumers’ perceived usefulness toward a website significantly influenced on consumers’ use intentions. Currently, if the system quality provided by an online shopping platform cannot provide consumers perceived usefulness, consumers with utilitarian value may be negatively effect on perceived risk (Ring, Shriber & Horton, 2007). Researches revealed that only when e-vendor gets along with customers, the consumers’ perceived risk toward the website reduced (Dholakia & Zhao, 2009). Hedonic value influenced a great number of perspectives on consumers’ perceived information processing, such as increasing consumers’ loyalty to a website (Dube et al., 2003), and effect on perceived website trust (Hwang & Kim, 2007). The following hypotheses are formed as follows:

**H3:** The consumers with utilitarian value have negatively effect on perceived risk for online shopping.

**H4:** The consumers with hedonic value have negatively effect on perceived risk for online shopping.

### 2.3 Purchase Intention

Purchase intention was one kind of behavioral intention, and the so-called behavioral intention, indicates our subjective judgment on what we will do in the future. Therefore, purchase intention means one’s possible action intention, which can be used to predict consumer’s purchase behavior. Each concept of behavioral intention represents individual projection or the particular expected behavior to be performed. For e-commerce, the variable ultimately followed with interest is consumer behavior, especially whether or not consumers would like to purchase goods through e-commerce. In this study, it was defined as consumers’ purchase intention (McKnight & Chervany, 2002).

The research results of Doney and Joseph (1997) and Ramsey and Sohi (1997) indicated that customers’ trust in a seller positively influenced and continued the purchase intention. Bloemer and Odekerken-Schroder (2002) addressed that when consumers’ trust in a store increased, their commitment to the store increased, and, concurrently, their purchase intention increased. The research of Qureshi et al. (2009) on consumers’ online shopping behavior argued that consumers’ perceived trust in a website positively influenced the shopping intention. The following hypotheses are formed as follows:

**H5:** Consumers’ perceived trust has positively effect on purchase intention for online shopping.

Many studies explored the effect of perceived risk on e-commerce and indicated that perceived risk negatively influenced the purchase intention of using the Internet. For instance, Grazioli and Jarvenpaa (2000) found that consumers’ perceived risk of a store influenced the purchase intention through the negative attitude toward the store. Joaquin et al. (2009) empirically pointed out that perceived risk would negatively influence consumers’ will to use the Internet. The following hypotheses are formed as follows:

**H6:** Consumers’ perceived risk has negatively effect on purchase intention for online shopping.

Forsythe et al. (2006) revealed that “the Internet tends to magnify some of the uncertainties involved with any purchase process and consumers perceive a high of risk when purchasing on the Internet compared with traditional retail.” Perceived risk has been evidenced as a major barrier to online shopping (Joaquin et al., 2009). Therefore, when perceived risk can be increased through using online shopping for consumers, perceived risk may be decreasing the relationships between perceived trust and purchase intention. Thus, we suggest the following hypothesis:

**H7:** The effects of perceived trust on online shopping will be equal for high and low perceived risk groups.
3. Methods

3.1 Data Collection

This study aimed at investigating the factors influencing consumers to employ online shopping as well as the behavior of consumer values, in which the perceived website attitude further resulted in satisfaction and purchase intention. Therefore, the population included people who had ever employed B2C online shopping in Taiwan.

482 valid questionnaires were collected. The characteristics of the sample structure in this research were female 61.2%, and male 38.8%, which indicated that people shopping by means of the Internet were mostly females. The age of the respondents was mostly 21-30 years old, accounting for 55.6%, which indicated young people were currently the major users. For education background, junior college or college was the majority, accounting for 67.2%. In terms of monthly disposable income, 5,000~10,000 was the majority, accounting for 33.8%. For the frequency of using the Internet, the average daily online time of 1-3 hours was the majority, accounting for 45.8%; the average experience of using the online shopping platform for more than 3 years accounted for 54.7%.

3.2 Measures

This research assessed all constructs as multi-item measures. All measures were obtained from a self-report questionnaire. Unless otherwise noted, we scored each item on a seven-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree (7)”. Table 1 exhibits the mean, variable, and correlations for each dimension. Utilitarian value: Defined in this study as those consumers’ shopping behavior focused on utility and effectiveness, measured by referring to the five items brought up by Wang et al. (2007). Hedonic value: Defined in this study as that consumers’ shopping behavior resulting from the motives of fun or entertainment, measured by referring to the five items brought up by Wang et al. (2007). Perceived trust: Integrating scholars’ perspectives, perceived trust were adapted from Bhattacherjee (2002), and seven items were used to measure this construct. Perceived risk: Integrating scholars’ perspectives, this study defined perceived risk as the possible loss which consumers considered might happen when they shopped in an online store, and it was measured by referring to the six items brought up by McKnight and Chervany (2002). Purchase intention: Defined in this study as consumers’ purchase intention generated after their overall evaluation of a shopping website, measured by referring to the four items brought up by Jarvenpaa et al. (2000).

4. Data Analysis

4.1 Validity Measure

Following Anderson and Gerbing’s (1988) two-step approach in SEM, the first stage involved testing the reliability

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Utilitarian Value</td>
<td>0.872</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.941</td>
<td>0.761</td>
</tr>
<tr>
<td>2. Hedonic Value</td>
<td>0.297**</td>
<td>0.781</td>
<td></td>
<td></td>
<td></td>
<td>0.887</td>
<td>0.611</td>
</tr>
<tr>
<td>3. Perceived Trust</td>
<td>0.392**</td>
<td>0.397**</td>
<td>0.707</td>
<td></td>
<td></td>
<td>0.875</td>
<td>0.500</td>
</tr>
<tr>
<td>4. Perceived Risk</td>
<td>-0.359**</td>
<td>-0.329**</td>
<td>-0.505**</td>
<td>0.819</td>
<td></td>
<td>0.924</td>
<td>0.671</td>
</tr>
<tr>
<td>5. Purchase Intention</td>
<td>0.383**</td>
<td>0.351**</td>
<td>0.462**</td>
<td>-0.335**</td>
<td>0.894</td>
<td>0.941</td>
<td>0.800</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Variable</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.150</td>
<td>4.892</td>
<td>0.940</td>
</tr>
<tr>
<td></td>
<td>5.039</td>
<td>0.901</td>
<td>0.885</td>
</tr>
<tr>
<td></td>
<td>3.648</td>
<td>0.819</td>
<td>0.874</td>
</tr>
<tr>
<td></td>
<td>5.551</td>
<td>1.352</td>
<td>0.924</td>
</tr>
<tr>
<td></td>
<td>1.237</td>
<td>0.941</td>
<td></td>
</tr>
</tbody>
</table>

Note
1. all variables were measured by 7-point-scale.
2. * significant at $p<0.05$; ** significant at $p<0.01$
3. AVE = average variance extracted; CR = composite reliability.
4. Diagonal entries are the square roots of AVE.
Table 2: The results of the structural model

<table>
<thead>
<tr>
<th>Hypothesized relationship</th>
<th>Estimate</th>
<th>t-value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 Utilitarian value →</td>
<td>0.359</td>
<td>7.496</td>
<td>Supported</td>
</tr>
<tr>
<td>Perceived trust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedonic value →</td>
<td>0.386</td>
<td>7.525</td>
<td>Supported</td>
</tr>
<tr>
<td>Perceived trust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3 Utilitarian value →</td>
<td>-0.318</td>
<td>-6.875</td>
<td>Supported</td>
</tr>
<tr>
<td>Perceived risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4 Hedonic value →</td>
<td>-0.299</td>
<td>-6.179</td>
<td>Supported</td>
</tr>
<tr>
<td>Perceived risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H5 Perceived trust →</td>
<td>0.448</td>
<td>8.617</td>
<td>Supported</td>
</tr>
<tr>
<td>Purchase intention</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H6 Perceived risk →</td>
<td>-0.135</td>
<td>-2.976</td>
<td>Supported</td>
</tr>
<tr>
<td>Purchase intention</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:
1. t-value is significant at p<0.05 when the t-value exceeds 1.96.
2. $R^2$ value (SMC = squared multiple correlation):
   Perceived trust: $R^2 = 0.278$, Perceived risk: $R^2 = 0.190$, Purchase intention: $R^2 = 0.247$.

and confirmatory factor analysis (CFA) of each construct. CFA included convergent validity and discriminant validity to measure a robust measurement model. The second stage tested the hypotheses of this study by a structural model.

The measurement model showed good fit: $\chi^2 = 536.663$, d.f. = 314, $\chi^2$/d.f. = 1.709, GFI = 0.923, AGFI = 0.908, CFI = 0.976, PNFI = 0.844, PCFI = 0.873, RMSEA = 0.038. According to Hair Jr. et al. (2006), convergent validity of CFA results should be supported by item reliability, composite reliability (CR) and average variance extracted (AVE) of latent variables. Convergent validity for each of the measures, as indicated by Cronbach’s alpha, all exceeded the 0.7 benchmark (Nunnally, 1978). As Table 1 shows, the minimum reliability across the measures is 0.874. Discriminant validity was confirmed by verifying that all square roots of AVE among dimensions are actually higher than each pair of dimension correlations (Fornell & Larcker, 1981). Table 1 results confirm convergent validity and discriminant validity.

4.2 Analysis and Results

The hypotheses were tested using SEM (maximum likelihood estimate), and scale values indicated each latent construct. The structural model showed an adequate fit: $\chi^2 = 679.688$, d.f. = 318, $\chi^2$/d.f. = 0.137, GFI = 0.905, AGFI = 0.887, CFI = 0.960, RMSEA = 0.049. The path coefficients of the structural model provided a graphic representation of the hypotheses supported. In Table 2, we believe path estimates based on this result are conclusive, representing direct effect among latent variables. The more the value is, the higher the correlation among variables is. Table 2 also shows the $R^2$ value, which indicated how the antecedents explained an endogenous variable. Accounted for 27.8% for the variation in perceived trust, perceived risk and purchase were 19%, 24.7%, respectively.

4.3 Testing the Moderating Effect of Perceived Risk

This study used a multi-group causal analysis to test the moderating effect of perceived risk. Respondents were split into high and low groups based on mean-split perceptions of perceived risk. A structural model linking perceived trust with purchase intention was constrained to force equal loading between the high and low groups of perceived risk. A chi-square difference test was compared between high and low groups to identify whether were significantly different. As shown in Table 3, the chi-square difference was 85.022 ($p< 0.001$) for the perceived trust-purchase intention link. The results indicate that these path coefficients are invariant and high significant at $p<0.001$ across two risk groups. Thus H7 was supported.

Table 3 Chi-square difference test

<table>
<thead>
<tr>
<th>Fit index</th>
<th>Constrained model</th>
<th>Unconstrained model</th>
<th>$\Delta \chi^2 (1)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square</td>
<td>308.761 (162)</td>
<td>223.739 (161)</td>
<td>85.022***</td>
</tr>
<tr>
<td>(d.f.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GFI</td>
<td>0.920</td>
<td>0.939</td>
<td></td>
</tr>
<tr>
<td>AGFI</td>
<td>0.897</td>
<td>0.921</td>
<td></td>
</tr>
<tr>
<td>CFI</td>
<td>0.969</td>
<td>0.987</td>
<td></td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.043</td>
<td>0.028</td>
<td></td>
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</tbody>
</table>

Perceived risk

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>H7 : Perceived trust → Purchase intention ($b_{ij}$)</td>
<td>0.647***</td>
<td>0.283***</td>
</tr>
</tbody>
</table>

*p<0.05;** p<0.01;*** p<0.001
5. Conclusion and Implications

This study provided support for the theoretical model and for the hypotheses regarding the linkages between the constructs. First, both consumer values positively affected perceived trust, which implied that whatever type of consumer value it was, consumers have certain degree of belief in perceived trust. On the contrary, both consumer values negatively affected perceived risk, it indicated that whatever type of consumer value it was, there was a certain degree of uncertainty in perceived risk (Ma & Wang, 2009).

Second, perceived trust positively influenced purchase intention and perceived risk negatively influenced purchase intention, it implied that if consumers consider trust belief for online shopping, it positively tends to purchase intention for website shopping. Opposed to difference points, if consumers consider that used website shopping was perceived risk, it negatively attends to purchase intention for website shopping. Finally, this study check of the moderating effects of perceived risk reveals that perceived risk does moderate the relationships between perceived trust and purchase intention.

Future, prior perspectives on value always focused on the ratio concept of benefit and sacrifice, namely adopting rational viewpoints (Chang & Wildt, 1994; Zeithaml, 1988) and ignoring utilitarian value and hedonic value on consumers’ psychological minds (Overby & Lee, 2006). When compared with traditional physical stores, online shopping confronted more uncertainty and information asymmetry, caused more perceived risk for consumers. The more convenience and interactivity a website provided, the closer it would be to the experience of the real world. This would hence influence consumers’ perception, and the information would influence consumers when they made decisions. Consequently, it is suggested that e-vendors should care and make sure the website technology will enable consumers to gather complete and accurate product information, since consumer with utilitarian value will influence purchase intention for website shopping.

References


